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Application No. 10/822,642

REMARKS

Claims 20, 25, 26, 28, 40-47 are pending. By this Amendment, claims 22, 23, 29 and 30 are canceled without prejudice in favor of new claims 44-47. Specifically, new claims 44-47 present the subject matter of previous claims 22, 23, 29 and 30 with new claim ordering. Applicant notes that the number of total claims is unchanged. Claims 20, 25, 31, 41 and 45 are amended. Claims 20, 25, 41 and 43 are amended for clarity with respect to the antecedent basis as described further below. The specification supports the amendment of claims 20 and 31, for example, at page 11, lines 16-20. No new matter is introduced by the amendments.

All pending claims stand rejected. Applicants respectfully request reconsideration of the rejections based on the following analysis.

Claim Objection

The Examiner objected to claim 22-23 and 29-30 as being in improper dependent form under 37 C.R.F. 1.75(c) since they limit a subsequent claim rather than a previous claim. Applicant has canceled claims 22, 23, 29 and 30 in favor of new claims 44-47. In view of the cancellation of these claims, Applicant respectfully request withdrawal of the objection to the claims.

Rejection under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 20, 22, 23, 25, 26, 28-39, 41 and 43 under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner asserted four specific issues that are addressed in order.

First, the Examiner maintained it was unclear if the range in claim 20 was a value between 0.02 and 0.55 or a value that goes from 0.02 to 0.55. The Examiner asserts on page 3 of the Office Action that "the literal meaning" of the claim language is that the density goes from

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0.02 to 0.55, i.e., starting out at 0.02 and then it reaches 0.55. In the Examiner's response to Arguments, the Examiner states that "It could be that it requires the average be in the range. It could be that the localized average starts out at 0.02 and then ranges up to 0.55. To put it another way: a density is usually a single value; a range is usually plural values. The claim requires that the density is a range. ..." With all due respect, the claim is not intended in any way to be this complicated. What is a localize average? If the Examiner is indicating a temporal change, Applicant notes that the claim does not refer to any temporal change in the coating at all.

A coating has an average density, i.e., the density averaged over all the locations of the coating. The average density is then within the stated range. Nothing in the plain reading of the claim implies anything about any other value. The average density has a value relative to the full bulk density that is a factor from 0.02 to 0.55. Applicant has tried to further clarify this terminology, and it seems completely clear to Applicant. As described below with respect to other rejections, the Examiner seems to be reading some temporal change in the density in the claim language. However, the claim is not referring to any temporal change in density. Please call the undersigned to discuss if this language is still not clear. With all due respect, Applicant maintains that this is plane and clear wording.

With respect to claim 20, the Examiner noted that there was a confusing antecedent basis for "the coating composition." Applicant thanks the Examiner for a careful reading of the claim. Applicant has corrected this to read "the coating." Applicant has also corrected this antecedent reference in claim 31. The density should refer to the coating, and reference to a coating composition has been removed to avoid any ambiguity. Applicants believe that the removal of references to a coating composition should appropriately clarify these issues.

With respect to claim 25, the Examiner indicated that it was unclear if the reference to particles and "average primary particle diameter" referred to corresponding features in claim 20.

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Again, Applicant thanks the Examiner for a careful reading of the claim. Applicant has amended claim 25 to clarify that the claim is indeed referring to the same particles and diameters as specified in claim 20.

With respect to claims 41 and 43, the Examiner noted a confusing antecedent basis for "the average density" and "factor." Applicant thanks the Examiner for noting these issues. Applicant has amended claims 41 and 43 for clarity. As clarified, Applicant believes that it is clear that the average density and the factor are the same as the "average density" and "factor" as in the corresponding independent claims.

In view of the clarifying amendments, Applicants respectfully request withdrawal of the rejection of claims 20, 22, 23, 25, 26, 28-39, 41 and 43 under 35 U.S.C. § 112, second paragraph, as being indefinite.

Rejection Over Hicks, Miller, Berkey, and Kobayashi

The Examiner rejected claims 20, 22-23, 25-26, 28-30, 39 and 41 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,749,396 to Hicks (Hicks) in view of U.S. Patent 4,501,602 to Miller (Miller), U.S. Patent 4,684,384 to Berkey (Berkey) and U.S. Patent 3,957,474 to Kobayashi et al. (Kobayashi). The Examiner indicated that the general nature of the references was disclosed in the previous Office Actions. Applicant has amended claim 20 to more particularly point out Applicant's claimed invention. These amendments emphasize more fundamental differences between Applicant's claimed invention and the teachings of the prior art. Applicant maintains that the combined teachings of the cited references do not render Applicant's invention *prima facie* obvious. Applicant respectfully requests reconsideration of the rejection based on the following comments.

As an initial matter, on page 5 of the Office Action, the Examiner states that "This is not convincing because the present claim only requires powder goes through a single range in

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densities. Moreover, applicant gives no rational to explain why the density would be inconsistent." With all due respect, there seems to be some misunderstanding regarding the claim since the powder does not go through any range in densities.

Claim 20 has one method step, which involves inserting a coated insert. The coated insert has a coating that has an average density. This average density does not change. The rest of the claim describes the properties of this coating. With all due respect, nothing in the claim describes anything at all about changing the coating or its density. The claim is simply not referring to any temporal change in the coating.

The claimed coating is a porous structure such that particles can be observed in the coating. Due to the porosity, the coating has a density less than the density of the composition in the coating if it were fully densified. The claim does not say that the coating is ever densified, and Applicant's claimed method does not involve densifying their coating.

Next, Applicant would like to describe additional fundamental differences with the cited references. Under a Graham analysis the cited references should be compared with the claimed subject matter. Specifically, "a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions." KSR Int'l Co. v. Teleflex Inc, 127 S.Ct. 1727, 1731. "Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person of ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." Id. at 1731.

We need to consider the differences between the references as a whole and the claimed subject matter as a whole. Applicant realized that the claim may not have been clear with respect

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to the coating of the insert being distinguishable from the insert's core. This feature points to more fundamental differences between the teachings of the references and Applicant's claimed invention. Thus, Applicant amended the claims to clarify this issue.

In particular, while Hicks teaches inserting the inner member 10 into outer member 12, Hicks does not teach forming a bimodal distribution of dopant concentration. None of the other references teach inserting an insert that is a glass rod with a porous coating, as a step to making an optical fiber preform with a bimodal distribution of dopant concentration. The bimodal distribution of dopant concentration results from placing a dopant within the coating that is different from the coating concentrations in either the glass rod or the outer glass preform structure. This represents a fundamental difference between Applicant's claimed invention and the teachings of the cited references.

Since the references alone or combined do not teach all of the claim elements, the combined teachings of the references do not render Applicant's invention *prima facie* obvious. In view of the above comments, Applicant respectfully requests withdrawal of the rejection of claims 20, 22-23, 25-26, 28-30, 39 and 41 under 35 U.S.C. § 103(b) as being unpatentable over Hicks in view of Berkey, Kobayashi and Miller. Although Applicants do not acquiesce in the Examiner's position on the particular issues relating to the dependent claims, Applicants do not presently comment on the specific issues relating to the dependent claims since these issues are moot in view of the comments above.

Rejection Over Hicks, Berkey and Kobayashi under 35 U.S.C. § 103(a)

The Examiner rejected claims 31-38 and 43 under 35 U.S.C. § 103(a) as being unpatentable over Hicks in view of Miller, Berkey, Kobayashi and U.S. Patent 5,958,348 to Bi et al. (Bi). Applicant has amended claim 31 to more particularly point out their claimed invention. Applicant notes that significant features of the claimed invention are absent from the teachings of

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the references. Thus, the combined teachings of the references do not render Applicant's claimed invention *prima facie* obvious. Applicant respectfully request reconsideration of the rejection based on the following comments.

Applicant has amended claim 31 to clarify fundamental differences between Applicant's claimed invention and the teachings of the cited references. In particular, none of the claimed references alone or combined teach the placement of a coated insert within a glass preform structure to form a bimodal radial distribution in dopant concentration in the resulting structure. Thus, the combined teachings of the references do not render Applicant's claimed invention *prima facie* obvious.

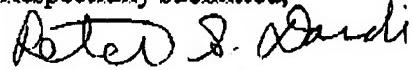
Since the combined teachings of the cited references do not render the claims *prima facie* obvious, Applicants respectfully request withdrawal of the rejection of claims 31-38 and 43 under 35 U.S.C. § 103(a) as being unpatentable over the Hicks patent in view of Müller, Berkey, Kobayashi and Bi. Although Applicants do not acquiesce in the Examiner's position on the particular issues relating to the dependent claims, Applicants do not presently comment on the specific issues relating to the dependent claims since these issues are moot in view of the comments above.

CONCLUSIONS

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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